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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,343	09/08/2003	John Chen	P/144-321	1656

7590 07/25/2005

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EXAMINER

FIGUEROA, FELIX O

ART UNIT PAPER NUMBER

2833

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,343

Applicant(s)

CHEN ET AL.

Examiner

Felix O. Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 6, 7, 8/7, 8/1, 8/2, 8/4, 8/5, 8/6, 9/8/1, 9/8/2, 9/8/4-9/8/6, 9/8/7 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 3, 8/3, 9/8/3 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-17 in the reply filed on June 16, 2005 is acknowledged.

Drawings

The drawings are objected to under 37 CFR 1.84(h)(1). When an exploded view is shown in a figure which is on the same sheet as another figure, the exploded view should be placed in brackets. See Figures 2, 5d and 6a-6c.

The drawings are objected to under 37 CFR 1.84(h)&(i) because all views must be clearly separated from one another and one view must not be placed upon another or within the outline of another. In Figures 5a-5g and 6a-6c, it is unclear which Figure are characters the arrows part of. Correction is required.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(1) and 37 CFR 1.84(q) because they include improper text such as "Forming". It is brought to applicant's attention that such descriptive text should be on the "description of the invention", and not in the drawings. See figures 5a-5d, 5f, 5g, 6a-6b, 7 and 8. Correction is required.

The drawings are objected to as failing to comply with 37 CFR 1.84(h)(5) because modified forms of the same part should not be shown in the same figure. Therefore, Figure 7 should be two independent figures. It is suggested that Fig. 7 be changed to Fig. 7a and Fig. 7b.

Claim Objections

Claims 1-3, 5, 6, 10, 11, 14 and 15 are objected to because of the following informalities:

In claim 1 lines 11, 13 and 14, "the other" should be --another--.

In claim 2 line 3, "the other" should be --another--.

In claim 3 line 2, "the other" should be --another--.

In claim 5 lines 1-2, "the respective first portions" lacks antecedent basis. In line 3, "the spacing" lacks antecedent basis.

In claim 6 lines 1-2, "the respective first portions" lacks antecedent basis.

In claim 10 line 5, "two" should be --upper and lower--.

In claim 11 lines 3-4, "the other" should be --another--.

In claim 14 lines 1-2, "the respective first portions" lacks antecedent basis. In line 3, "the spacing" lacks antecedent basis.

In claim 15 lines 1-2, "the respective first portions" lacks antecedent basis.

Appropriate correction is required.

Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claims to place the claim in proper dependent form, or rewrite the claim in independent form. Please note that the limitation of "upper and lower vertically aligned compartments" is disclosed in claim 10 lines 2-3. Accordingly, claim 17 will not be treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 6, 8/1, 8/2, 8/4, 8/5 and 8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 6,132,260) in view of the prior art Figures 1-3 of Yamamoto et al. (US 5,865,934).

Wu discloses a multi-port connector comprising: a housing (2) having at least two aligned compartments (210,212) to receive respective plugs; a printed wiring board (7) separating the two compartments and having circuit patterns (70) on opposite sides; a first plurality of conductive contact fingers (4 top) in one of the compartments and having first and second portions (41,42); a second plurality of conductive contact finger (4 bottom) in another of the compartments and having first and second portions.

Wu discloses substantially the claimed invention except for the multiple layers on the printer wiring board. The prior art of Yamamoto teaches a multiplayer printed wiring board having circuit patterns (23) on opposite sides of opposed non-conductive layers (22) and a metal shielding layer intermediate the non-conductive layers to provide structural strength and heat dissipation. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the printed wiring board of Wu as a multiplayer printed wiring board having circuit patterns on opposite sides of opposed non-conductive layers and a metal shielding layer

intermediate the non-conductive layers, as taught by the prior art of Yamamoto, to provide structural strength and heat dissipation.

Regarding claim 2, Wu discloses an assembly housing (5) in one of the compartments. Please note that the recitation of the intended use (i.e. for housing two sets of toroids) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 5, Wu discloses the first portions of the contact fingers having spacings equal to the spacings between the contacts in the corresponding plug.

Regarding claim 6, Wu discloses the second portions spaced apart by a distances greater than he spacing of the first portions (Fig.3).

Regarding claim 8/1, 8/2 and 8/4-8/6, Wu discloses the compartments being upper and lower vertically aligned compartments.

Claims 7 and 8/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of the prior of Yamamoto et al., and further in view of Laity (US 6,183,308).

Wu, as modified by the prior of Yamamoto discloses substantially the claimed invention except for resilient spring action of the contact finger. Laity teaches a connector having contact fingers (354) with resilient second portions (358) being connected to traces on a circuit board by spring action to provide a resilient and secure

connection. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Wu having contact fingers with resilient second portions being connected to traces on a circuit board by spring action, as taught by Laity, to provide a resilient and secure connection.

Claims 9/8/1, 9/8/2, 9/8/4-9/8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of the prior art of Yamamoto et al. and further in view of Goodall et al. (US 5,531,612).

Wu, as modified, discloses substantially the claimed invention except for the metallic shields. Goodall teaches the use of front and rear metallic shields to protect the connector from external electromagnetic interference. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Wu having front and rear metallic shields, as taught by Goodall, to protect the connector from external electromagnetic interference.

Claims 9/8/7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of the prior art of Yamamoto et al. and Laity, and further in view of Goodall et al.

See previous discussion on claims 9/8/1, 9/8/2, 9/8/4-9/8/6.

Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of the prior art of Yamamoto et al. and further in view of Goodall et al.

Wu, as modified, discloses substantially the claimed invention except for the plurality of sets of upper and lower vertically aligned compartments. Goodall teaches a plurality of sets of upper and lower vertically aligned compartments to maximize space. Therefore, it would have been obvious to a person of ordinary skill in the art at the time

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the invention was made to duplicate the connector of Wu to have a plurality of sets of upper and lower vertically aligned compartments, as taught by Goodall, to maximize space.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of the prior art of Yamamoto et al. and further in view of Goodall et al. and Laity.

See previous discussion on claim 7.

Allowable Subject Matter

Claims 3, 8/3, 9/8/3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest a multi-port connector comprising at least two compartments and one of the compartments having a metal separator for separating two sets of toroids, in combination with the limitation of the intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Givens et al. (US 6,474,999) teaches a multi-port connector with a printed wiring board. Wu (US 6,206,725) and Wojtacki et al. (US 6,511,348) teach multi-port connectors with metal shielding layers. Boutros et al. (US 6,102,741) teaches a connector with toroids.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Felix O. Figueroa
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